

**ABSTRACT OF THE DISCLOSURE**

A diagnostic tool that determines the type of defect present in a core composite sandwich structure. The diagnostic tool is portable and non-destructive. The diagnostic tool locally generates and records load versus displacement measurements for the core composite sandwich skin, in both the tension and compression directions. These values are then compared to similar measurements taken in a non-discrepant area of the structure. Defect type is determined based on the differences in the load/displacement behavior between the non-discrepant and discrepant locations.

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